

### **AMENDMENTS TO THE SPECIFICATION**

Please amend the paragraph beginning on page 12, line 23 as follows:

One skilled in the art can obtain molecular information via mass spectrometry to determine the presence and/or relative levels of targeted agent(s), assisted by various spectral interpretation methods and database searching tools. Examples of some of these methods and tools can be found at the Swiss Institute of Bioinformatics website at [www.expasy.com](http://www.expasy.com), and the European Molecular Biology Laboratory website at [www.mann.embl-heidelberg.de](http://www.mann.embl-heidelberg.de). Examples of a mass spectrometer apparatus can be found in U.S. Pat. No. 6,525,314.

Please amend the paragraph beginning on page 17, line 19 as follows:

In various embodiments, DNA primers specific to the targeted agent being surveyed would then be assayed by real time PCR. For example, three genetic loci unique to *Bacillus anthracis* have been recommended by the CDC and primers and reaction conditions are commercially available (e.g. IDI, Quebec, Canada). Techniques recommended by the CDC for assaying for anthrax are disclosed in J. Environ. Health, Anthrax -- CDC Review, Oct. 2003; 66(3):42; Butler et al., Collaboration Between Public Health and Law Enforcement: New Paradigms and Partnerships for Bioterrorism Response and Planning, Emerg. Infect. Disease, 8(10):1152-1156 (Oct. 2002); and Hoffmaster AF et al., Evaluation and validation of a real-time polymerase chain reaction assay for rapid identification of *Bacillus anthracis*, Emerg Infect Dis., Vol. 8, Oct. 2002. Available from: URL: [http://www.cdc.gov/ncidod/EID/vol8no10/02\\_0393.htm](http://www.cdc.gov/ncidod/EID/vol8no10/02_0393.htm)). Each of these references are hereby incorporated by reference in their entirety.

Please amend the paragraph beginning on page 21, line 23 as follows:

Other embodiments of the present invention will utilize current epidemiological tracing techniques to properly analyze positive results for targeted agent(s) so as to determine the location of a hot spot or drop zone. The foundation for these modern epidemiological methods, currently an area of great interest to the scientific community, is found in John Snow's classic

studies on the cholera outbreak in nineteenth-century London. See On the Mode of Communication of Cholera, John Snow, 1855, viewable at <http://www.ph.ucla.edu/epi/snow/snowbook.html>.

Please amend the paragraph beginning on page 25, line 28 as follows:

100 mL of fluid is collected from the chamber of a street sweeper chamber, after making its daily rounds and assayed for *Bacillus anthracis*. Large particles from the fluid are excluded via suction filtration with 1.2  $\mu$ M pore membrane (Millipore Corp., Billerica, MA). The 1.2  $\mu$ M pore membrane is pasteurized at 70 °C to kill vegetative bacteria. The eluate is passed to another chamber and filtered with a 0.22  $\mu$ M membrane. The 0.22  $\mu$ M membrane is rinsed with a sterile physiological saline solution to remove soluble soils, proteins and other contaminants. The resulting filtrate, which contains particles ranging in size from 0.22 to 1.2  $\mu$ M, are suspended in approximately 1 mL of 1/4 strength Ringers solution, and heated to about 70 °C for 10-20 minutes to kill most vegetative bacteria and protozoa cells (Pasteuration). A vital dye such as Crystal Violet or Methylene Blue is added to the 1 mL solution to selectively stain any *Bacillus* spores present in the sample. After 1 minute, the cell suspension is rinsed and suspended in a protozoan culture medium containing a pure culture of approximately  $10^{5-6}$  *Tetrahymena pyriformis* protozoa. The *Tetrahymena* are harvested after about 60 minutes, but before 90 minutes of contact with the cell suspension, via centrifugation, filtration, or chemotaxis, and lysed and processed for the extraction of DNA according to parameters established by the Center for Disease Control (see Hoffmaster AF et al., Evaluation and validation of a real-time polymerase chain reaction assay for rapid identification of *Bacillus anthracis*, Emerg Infect Dis., Vol. 8, Oct. 2002. Available from: URL: <http://www.cdc.gov/ncidod/EID/vol8no10/02-0393.htm>).